OSDI 08
8th USENIX Symposium on Operating Systems Design and Implementation

Dec. 8–10, 2008
San Diego, CA

USENIX
Sponsored by USENIX in cooperation with ACM SIGOPS

Join us in San Diego, CA, December 8–10, 2008, for innovative, exciting work in the systems area. The OSDI symposium focuses on the design, implementation, and implications of systems software. With 26 high-quality papers selected, the 2008 program includes:

- Refereed papers representing a diverse range of hot research areas including cloud computing, OS architecture, monitoring, concurrency issues, and more
- A poster session where attendees can discuss emerging ideas in operating systems design and implementation
- Work-in-Progress (WiP) presentations on novel ideas in systems research

Don't miss this inspiring symposium covering the most innovative operating systems research.

Check out these co-located workshops:

- Fourth Workshop on Hot Topics in System Dependability (HotDep '08), Sunday, December 7
- First USENIX Workshop on the Analysis of System Logs (WASL '08), Sunday, December 7
- Workshop on Power Aware Computing and Systems (HotPower '08), Sunday, December 7
- Workshop on Supporting Diversity in Systems Research (Diversity '08), Sunday, December 7
- First Workshop on I/O Virtualization (WIOV '08), Wednesday–Thursday, December 10–11
- Third Workshop on Tackling Computer Systems Problems with Machine Learning Techniques (SysML08), Thursday, December 11

http://www.usenix.org/events/osdi08/workshops.html

REGISTRATION/HOTEL INFORMATION
Registration Fees

3 days of technical sessions	$875

If you are not a member of USENIX, ACM SIGOPS, EurOpen.SE, or NUUG, add $120 to your technical sessions fees.

Registration Fee for Full-Time Students: $350
Students who are not members of USENIX, add $45 to your technical sessions fees.

Hotel Information
Paradise Point Resort
1404 Vacation Road
San Diego, CA 92109
Tel: (800) 344-2626

Check www.usenix.org/events/osdi08/hotel.html for more details.

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TECHNICAL SESSIONS

Monday, December 8

8:45 a.m.–9:00 a.m.   Monday
Opening Remarks
Program Co-Chairs: Richard Draves, *Microsoft Research;* Robbert van Renesse, *Cornell University*

9:00 a.m.–10:30 a.m.   Monday
Cloud Computing
DryadLINQ: A System for General-Purpose Distributed Data-Parallel Computing Using a High-Level Language
Yuan Yu, Michael Isard, Dennis Fetterly, and Mihai Budiu, *Microsoft Research Silicon Valley;* Úlfar Erlingsson, *Reykjavík University, Iceland, and Microsoft Research Silicon Valley;* Pradeep Kumar Gunda and Jon Currey, *Microsoft Research Silicon Valley*

Everest: Scaling Down Peak Loads Through I/O Off-Loading
Dushyanth Narayanan, Austin Donnelly, Eno Thereska, Sameh Elnikety, and Antony Rowstron, *Microsoft Research Cambridge, United Kingdom*

Improving MapReduce Performance in Heterogeneous Environments
Matei Zaharia, Andy Konwinski, Anthony D. Joseph, Randy Katz, and Ion Stoica, *University of California, Berkeley*

10:30 a.m.–11:00 a.m.   Break

11:00 a.m.–12:30 p.m.   Monday
OS Architecture
Corey: An Operating System for Many Cores
Silas Boyd-Wickizer, *Massachusetts Institute of Technology;* Haibo Chen, Rong Chen, and Yandong Mao, *Fudan University;* Frans Kaashoek, Robert Morris, and Aleksey Pesterev, *Massachusetts Institute of Technology;* Lex Stein and Ming Wu, *Microsoft Research Asia;* Yuehua Dai, *Xi'an Jiaotong University;* Yang Zhang, *Massachusetts Institute of Technology;* Zheng Zhang, *Microsoft Research Asia*

CuriOS: Improving Reliability through Operating System Structure
Francis M. David, Ellick M. Chan, Jeffrey C. Carlyle, and Roy H. Campbell, *University of Illinois at Urbana-Champaign*

Redline: First Class Support for Interactivity in Commodity Operating Systems
Ting Yang, Tongping Liu, and Emery D. Berger, *University of Massachusetts Amherst;* Scott F. Kaplan, *Amherst College;* J. Eliot B. Moss, *University of Massachusetts Amherst*

12:30 p.m.–2:00 p.m.

Lunch   Monday

2:00 p.m.–3:30 p.m.   Monday
Monitoring
Network Imprecision: A New Consistency Metric for Scalable Monitoring
Navendu Jain, *Microsoft Research;* Prince Mahajan and Dmitry Kit, *University of Texas at Austin;* Praveen Yalagandula, *HP Labs;* Mike Dahlin and Yin Zhang, *University of Texas at Austin*

Lightweight, High-Resolution Monitoring for Troubleshooting Production Systems
Sapan Bhatia, *Princeton University;* Abhishek Kumar, *Google Inc.;* Marc E. Fiuczynski and Larry Peterson, *Princeton University*

Automating Network Application Dependency Discovery: Experiences, Limitations, and New Solutions
Xu Chen, *University of Michigan;* Ming Zhang, *Microsoft Research;* Z. Morley Mao, *University of Michigan;* Paramvir Bahl, *Microsoft Research*

3:30 p.m.–4:00 p.m.   Break

4:00 p.m.–5:30 p.m.   Monday
Work-in-Progress Reports (WiPs)
The Work-in-Progress reports (WiPs) session offers short presentations about research in progress, new results, or timely topics.

5:30 p.m.–6:00 p.m.   Monday
Inauguration of the Jay Lepreau Award for the Best Paper Presented at the 8th OSDI

6:30 p.m.–10:00 p.m.   Dave & Buster's

Symposium Reception   Monday
Join fellow attendees in a rousing game of skeeball, test your motor skills in the many driving games, or just sit back and enjoy dinner and conversation. Dave & Buster's offers a wide array of fun activities. Don't miss out on the chance to catch up with colleagues in a friendly environment. See you there!

Tuesday, December 9

9:00 a.m.–10:30 a.m.   Tuesday
File Systems
SQCK: A Declarative File System Checker
Haryadi S. Gunawi, Abhishek Rajimwale, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau, *University of Wisconsin, Madison*

Transactional Flash
Vijayan Prabhakaran, Thomas L. Rodeheffer, and Lidong Zhou, *Microsoft Research, Silicon Valley*

Avoiding File System Micromanagement with Range Writes
Ashok Anand and Sayandeep Sen, *University of Wisconsin, Madison;* Andrew Krioukov, *University of California, Berkeley;* Florentina Popovici, *Google;* Aditya Akella, Andrea Arpaci-Dusseau, Remzi Arpaci-Dusseau, and Suman Banerjee, *University of Wisconsin, Madison*

10:30 a.m.–11:00 a.m.   Break

11:00 a.m.–12:30 p.m.   Tuesday
Programming Language Techniques
Binary Translation Using Peephole Superoptimizers
Sorav Bansal and Alex Aiken, *Stanford University*

R2: An Application-Level Kernel for Record and Replay
Zhenyu Guo, *Microsoft Research Asia;* Xi Wang, *Tsinghua University;* Jian Tang and Xuezheng Liu, *Microsoft Research Asia;* Zhilei Xu, *Tsinghua University;* Ming Wu, *Microsoft Research Asia;* M. Frans Kaashoek, *MIT CSAIL;* Zheng Zhang, *Microsoft Research Asia*

KLEE: Unassisted and Automatic Generation of High-Coverage Tests for Complex Systems Programs
Cristian Cadar, Daniel Dunbar, and Dawson Engler, *Stanford University*

12:30 p.m.–2:00 p.m.

Lunch   Tuesday

2:00 p.m.–3:30 p.m.   Tuesday
Security
Hardware Enforcement of Application Security Policies Using Tagged Memory
Nickolai Zeldovich, *Massachusetts Institute of Technology;* Hari Kannan, Michael Dalton, and Christos Kozyrakis, *Stanford University*

Device Driver Safety Through a Reference Validation Mechanism
Dan Williams, Patrick Reynolds, Kevin Walsh, Emin Gün Sirer, and Fred B. Schneider, *Cornell University*

2:00 p.m.–3:00 p.m. (continued)   Tuesday
Digging for Data Structures
Anthony Cozzie, Frank Stratton, Hui Xue, and Samuel T. King, *University of Illinois at Urbana-Champaign*

3:30 p.m.–4:00 p.m.   Break

4:00 p.m.–5:30 p.m.   Tuesday
Dealing with Concurrency Bugs
Finding and Reproducing Heisenbugs in Concurrent Programs
Madanlal Musuvathi, Shaz Qadeer, and Thomas Ball, *Microsoft Research;* Gerard Basler, *ETH Zurich;* Piramanayagam Arumuga Nainar, *University of Wisconsin, Madison;* Iulian Neamtiu, *University of California, Riverside*

Gadara: Dynamic Deadlock Avoidance for Multithreaded Programs
Yin Wang, *University of Michigan and Hewlett-Packard Laboratories;* Terence Kelly, *Hewlett-Packard Laboratories;* Manjunath Kudlur, Stéphane Lafortune, and Scott Mahlke, *University of Michigan*

Deadlock Immunity: Enabling Systems to Defend Against Deadlocks
Horatiu Jula, Daniel Tralamazza, Cristian Zamfir, and George Candea, *École Polytechnique Fédérale de Lausanne (EPFL), Switzerland*

6:00 p.m.–7:30 p.m.

Poster Session and Happy Hour   Tuesday
The list of accepted posters is available at http://www.usenix.org/events/osdi08/posters.html.

Wednesday, December 10

9:00 a.m.–10:30 a.m.   Wednesday
Various Good Things
Difference Engine: Harnessing Memory Redundancy in Virtual Machines
Diwaker Gupta, *University of California, San Diego;* Sangmin Lee, *University of Texas at Austin;* Michael Vrable, Stefan Savage, Alex C. Snoeren, George Varghese, Geoffrey M. Voelker, and Amin Vahdat, *University of California, San Diego*

Quanto: Tracking Energy in Networked Embedded Systems
Rodrigo Fonseca, *University of California, Berkeley, and Yahoo! Research;* Prabal Dutta, *University of California, Berkeley;* Philip Levis, *Stanford University;* Ion Stoica, *University of California, Berkeley*

Leveraging Legacy Code to Deploy Desktop Applications on the Web
John R. Douceur, Jeremy Elson, Jon Howell, and Jacob R. Lorch, *Microsoft Research*

10:30 a.m.–11:00 a.m.   Break

11:00 a.m.–noon   Wednesday
Wide-Area Distributed Systems
FlightPath: Obedience vs. Choice in Cooperative Services
Harry C. Li and Allen Clement, *University of Texas at Austin;* Mirco Marchetti, *University of Modena and Reggio Emilia;* Manos Kapritsos, Luke Robison, Lorenzo Alvisi, and Mike Dahlin, *University of Texas at Austin*

Mencius: Building Efficient Replicated State Machine for WANs
Yanhua Mao, *University of California, San Diego;* Flavio P. Junqueira, *Yahoo! Research Barcelona;* Keith Marzullo, *University of California, San Diego*